

Re-run

R. Hutton



## RAW SEQUENCE LISTING

PATENT APPLICATION: US/09/701,586C

DATE: 11/19/2002

TIME: 10:23:20

Input Set : N:\Crf4\11132002\I701586C.raw  
 Output Set: N:\CRF4\11192002\I701586C.raw

1 <110> APPLICANT: Kock, Michael  
 2       Hoeger, Thomas  
 3       Kroeger, Burkhard  
 4       Otterbach, Bernd  
 5       Lubisch, Wilfried  
 6       Lemaire, Hans-Georg  
 7 <120> TITLE OF INVENTION: Poly (ADP-ribose) polymerase-gene  
 8 <130> FILE REFERENCE: 0050/49100  
 C--> 9 <140> CURRENT APPLICATION NUMBER: US/09/701,586C  
 10 <141> CURRENT FILING DATE: 2000-11-30  
 11 <150> PRIOR APPLICATION NUMBER: PCT/EP99/03889  
 12 <151> PRIOR FILING DATE: 1999-06-04  
 13 <160> NUMBER OF SEQ ID NOS: 33  
 14 <170> SOFTWARE: PatentIn/WordPerfect  
 16 <210> SEQ ID NO: 1  
 17 <211> LENGTH: 1843  
 18 <212> TYPE: DNA  
 19 <213> ORGANISM: Homo sapiens  
 20 <220> FEATURE:  
 21 <221> NAME/KEY: CDS  
 22 <222> LOCATION: (3)...(1715)  
 23 <223> OTHER INFORMATION: product is Poly ADP Ribose Polymerase; from brain tissue  
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 25       cc atg gcg gcg cgg cgg cga cgg agc acc ggc ggc agg gcg aga                  47  
 26       Met Ala Ala Arg Arg Arg Arg Ser Thr Gly Gly Arg Ala Arg  
 27               1               5               10               15  
 28       gca tta aat gaa agc aaa aga gtt aat aat ggc aac acg gct cca gaa                  95  
 29       Ala Leu Asn Glu Ser Lys Arg Val Asn Asn Gly Asn Thr Ala Pro Glu  
 30               20               25               30  
 31       gac tct tcc cct gcc aag aaa act cgt aga tgc cag aga cag gag tcg                  143  
 32       Asp Ser Ser Pro Ala Lys Lys Thr Arg Arg Cys Gln Arg Gln Glu Ser  
 33               35               40               45  
 34       aaa aag atg cct gtg gct gga gga aaa gct aat aag gac agg aca gaa                  191  
 35       Lys Lys Met Pro Val Ala Gly Gly Lys Ala Asn Lys Asp Arg Thr Glu  
 36               50               55               60  
 37       gac aag caa gat gaa tct gtg aag gcc ttg ctg tta aag ggc aaa gct                  239  
 38       Asp Lys Gln Asp Glu Ser Val Lys Ala Leu Leu Lys Gly Lys Ala  
 39               65               70               75  
 40       cct gtg gac cca gag tgt aca gcc aag gtg ggg aag gct cat gtg tat                  287  
 41       Pro Val Asp Pro Glu Cys Thr Ala Lys Val Gly Lys Ala His Val Tyr  
 42               80               85               90               95  
 43       tgt gaa gga aat gat gtc tat gat gtc atg cta aat cag acc aat ctc                  335  
 44       Cys Glu Gly Asn Asp Val Tyr Asp Val Met Leu Asn Gln Thr Asn Leu

ENTERED

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Output Set: N:\CRF4\11192002\I701586C.raw

45	100	105	110	
46	cag ttc aac aac aac aag tac tat ctg att cag cta tta gaa gat gat			383
47	Gln Phe Asn Asn Asn Lys Tyr Tyr Leu Ile Gln Leu Leu Glu Asp Asp			
48	115	120	125	
49	gcc cag agg aac ttc agt gtt tgg atg aga tgg ggc cga gtt ggg aaa			431
50	Ala Gln Arg Asn Phe Ser Val Trp Met Arg Trp Gly Arg Val Gly Lys			
51	130	135	140	
52	atg gga cag cac agc ctg gtg gct tgt tca ggc aat ctc aac aag gcc			479
53	Met Gly Gln His Ser Leu Val Ala Cys Ser Gly Asn Leu Asn Lys Ala			
54	145	150	155	
55	aag gaa atc ttt cag aag aaa ttc ctt gac aaa acg aaa aac aat tgg			527
56	Lys Glu Ile Phe Gln Lys Phe Leu Asp Lys Thr Lys Asn Asn Trp			
57	160	165	170	175
58	gaa gat cga gaa aag ttt gag aag gtg cct gga aaa tat gat atg cta			575
59	Glu Asp Arg Glu Lys Phe Glu Lys Val Pro Gly Lys Tyr Asp Met Leu			
60	180	185	190	
61	cag atg gac tat gcc acc aat act cag gat gaa gag gaa aca aag aaa			623
62	Gln Met Asp Tyr Ala Thr Asn Thr Gln Asp Glu Glu Glu Thr Lys Lys			
63	195	200	205	
64	gag gaa tct ctt aaa tct ccc ttg aag cca gag tca cag cta gat ctt			671
65	Glu Glu Ser Leu Lys Ser Pro Leu Lys Pro Glu Ser Gln Leu Asp Leu			
66	210	215	220	
67	cgg gta cag gag tta ata aag ttg atc tgt aat gtt cag gcc atg gaa			719
68	Arg Val Gln Glu Leu Ile Lys Leu Ile Cys Asn Val Gln Ala Met Glu			
69	225	230	235	
70	gaa atg atg atg gaa atg aag tat aat acc aag aaa gcc cca ctt ggg			767
71	Glu Met Met Glu Met Lys Tyr Asn Thr Lys Lys Ala Pro Leu Gly			
72	240	245	250	255
73	aag ctg aca gtg gca caa atc aag gca ggt tac cag tct ctt aag aag			815
74	Lys Leu Thr Val Ala Gln Ile Lys Ala Gly Tyr Gln Ser Leu Lys Lys			
75	260	265	270	
76	att gag gat tgt att cggt gct ggc cag cat gga cga gct ctc atg gaa			863
77	Ile Glu Asp Cys Ile Arg Ala Gly Gln His Gly Arg Ala Leu Met Glu			
78	275	280	285	
79	gca tgc aat gaa ttc tac acc agg att ccg cat gac ttt gga ctc cgt			911
80	Ala Cys Asn Glu Phe Tyr Thr Arg Ile Pro His Asp Phe Gly Leu Arg			
81	290	295	300	
82	act cct cca cta atc cgg aca cag aag gaa ctg tca gaa aaa ata caa			959
83	Thr Pro Pro Leu Ile Arg Thr Gln Lys Glu Leu Ser Glu Lys Ile Gln			
84	305	310	315	
85	tta cta gag gct ttg gga gac att gaa att gct att aag ctg gtg aaa			1007
86	Leu Leu Glu Ala Leu Gly Asp Ile Glu Ile Ala Ile Lys Leu Val Lys			
87	320	325	330	335
88	aca gag cta caa agc cca gaa cac cca ttg gac caa cac tat aga aac			1055
89	Thr Glu Leu Gln Ser Pro Glu His Pro Leu Asp Gln His Tyr Arg Asn			
90	340	345	350	
91	cta cat tgt gcc ttg cgc ccc ctt gac cat gaa agt tac gag ttc aaa			1103
92	Leu His Cys Ala Leu Arg Pro Leu Asp His Glu Ser Tyr Glu Phe Lys			
93	355	360	365	

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Input Set : N:\Crf4\11132002\I701586C.raw

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94	gtg att tcc cag tac cta caa tct acc cat gct ccc aca cac agc gac	1151
95	Val Ile Ser Gln Tyr Leu Gln Ser Thr His Ala Pro Thr His Ser Asp	
96	370 375 380	
97	tat acc atg acc ttg ctg gat ttg ttt gaa gtg gag aag gat ggt gag	1199
98	Tyr Thr Met Thr Leu Leu Asp Leu Phe Glu Val Glu Lys Asp Gly Glu	
99	385 390 395	
100	aaa gaa gcc ttc aga gag gac ctt cat aac agg atg ctt cta tgg cat	1247
101	Lys Glu Ala Phe Arg Glu Asp Leu His Asn Arg Met Leu Leu Trp His	
102	400 405 410 415	
103	ggt tcc agg atg agt aac tgg gtg gga atc ttg agc cat ggg ctt cga	1295
104	Gly Ser Arg Met Ser Asn Trp Val Gly Ile Leu Ser His Gly Leu Arg	
105	420 425 430	
106	att gcc cca cct gaa gct ccc atc aca ggt tac atg ttt ggg aaa gga	1343
107	Ile Ala Pro Pro Glu Ala Pro Ile Thr Gly Tyr Met Phe Gly Lys Gly	
108	435 440 445	
109	atc tac ttt gct gac atg tct tcc aag agt gcc aat tac tgc ttt gcc	1391
110	Ile Tyr Phe Ala Asp Met Ser Ser Lys Ser Ala Asn Tyr Cys Phe Ala	
111	450 455 460	
112	tct cgc cta aag aat aca gga ctg ctg ctc tta tca gag gta gct cta	1439
113	Ser Arg Leu Lys Asn Thr Gly Leu Leu Leu Ser Glu Val Ala Leu	
114	465 470 475	
115	ggt cag tgt aat gaa cta cta gag gcc aat cct aag gcc gaa gga ttg	1487
116	Gly Gln Cys Asn Glu Leu Leu Glu Ala Asn Pro Lys Ala Glu Gly Leu	
117	480 485 490 495	
118	ctt caa ggt aaa cat agc acc aag ggg ctg ggc aag atg gct ccc agt	1535
119	Leu Gln Gly Lys His Ser Thr Lys Gly Leu Gly Lys Met Ala Pro Ser	
120	500 505 510	
121	tct gcc cac ttc gtc acc ctg aat ggg agt aca gtg cca tta gga cca	1583
122	Ser Ala His Phe Val Thr Leu Asn Gly Ser Thr Val Pro Leu Gly Pro	
123	515 520 525	
124	gca agt gac aca gga att ctg aat cca gat ggt tat acc ctc aac tac	1631
125	Ala Ser Asp Thr Gly Ile Leu Asn Pro Asp Gly Tyr Thr Leu Asn Tyr	
126	530 535 540	
127	aat gaa tat att gta tat aac ccc aac cag gtc cgt atg cgg tac ctt	1679
128	Asn Glu Tyr Ile Val Tyr Asn Pro Asn Gln Val Arg Met Arg Tyr Leu	
129	545 550 555	
130	tta aag gtt cag ttt aat ttc ctt cag ctg tgg tga atgttgatat	1725
131	Leu Lys Val Gln Phe Asn Phe Leu Gln Leu Trp	
132	560 565 570	
133	taaataaaacc agagatctga tcttcaagca agaaaataag cagtgttcta ctttgtaatt	1785
134	ttgttatatt ttatgtata aaaactgtac aggtctaaaa aaaaaaaaaa aaaaaaaaa	1843
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137 <211>	LENGTH: 570	
138 <212>	TYPE: PRT	
139 <213>	ORGANISM: Homo sapiens	
140 <400>	SEQUENCE: 2	
141	Met Ala Ala Arg Arg Arg Arg Ser Thr Gly Gly Gly Arg Ala Arg Ala	
142	1 5 10 15	
143	Leu Asn Glu Ser Lys Arg Val Asn Asn Gly Asn Thr Ala Pro Glu Asp	

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Input Set : N:\Crf4\11132002\I701586C.raw

Output Set: N:\CRF4\11192002\I701586C.raw

144	20	25	30
145	Ser Ser Pro Ala Lys Lys Thr Arg Arg Cys Gln Arg Gln Glu Ser Lys		
146	35	40	45
147	Lys Met Pro Val Ala Gly Gly Lys Ala Asn Lys Asp Arg Thr Glu Asp		
148	50	55	60
149	Lys Gln Asp Glu Ser Val Lys Ala Leu Leu Leu Lys Gly Lys Ala Pro		
150	65	70	75
151	Val Asp Pro Glu Cys Thr Ala Lys Val Gly Lys Ala His Val Tyr Cys		
152	85	90	95
153	Glu Gly Asn Asp Val Tyr Asp Val Met Leu Asn Gln Thr Asn Leu Gln		
154	100	105	110
155	Phe Asn Asn Asn Lys Tyr Tyr Leu Ile Gln Leu Leu Glu Asp Asp Ala		
156	115	120	125
157	Gln Arg Asn Phe Ser Val Trp Met Arg Trp Gly Arg Val Gly Lys Met		
158	130	135	140
159	Gly Gln His Ser Leu Val Ala Cys Ser Gly Asn Leu Asn Lys Ala Lys		
160	145	150	155
161	Glu Ile Phe Gln Lys Lys Phe Leu Asp Lys Thr Lys Asn Asn Trp Glu		
162	165	170	175
163	Asp Arg Glu Lys Phe Glu Lys Val Pro Gly Lys Tyr Asp Met Leu Gln		
164	180	185	190
165	Met Asp Tyr Ala Thr Asn Thr Gln Asp Glu Glu Glu Thr Lys Lys Glu		
166	195	200	205
167	Glu Ser Leu Lys Ser Pro Leu Lys Pro Glu Ser Gln Leu Asp Leu Arg		
168	210	215	220
169	Val Gln Glu Leu Ile Lys Leu Ile Cys Asn Val Gln Ala Met Glu Glu		
170	225	230	235
171	Met Met Met Glu Met Lys Tyr Asn Thr Lys Lys Ala Pro Leu Gly Lys		
172	245	250	255
173	Leu Thr Val Ala Gln Ile Lys Ala Gly Tyr Gln Ser Leu Lys Lys Ile		
174	260	265	270
175	Glu Asp Cys Ile Arg Ala Gly Gln His Gly Arg Ala Leu Met Glu Ala		
176	275	280	285
177	Cys Asn Glu Phe Tyr Thr Arg Ile Pro His Asp Phe Gly Leu Arg Thr		
178	290	295	300
179	Pro Pro Leu Ile Arg Thr Gln Lys Glu Leu Ser Glu Lys Ile Gln Leu		
180	305	310	315
181	Leu Glu Ala Leu Gly Asp Ile Glu Ile Ala Ile Lys Leu Val Lys Thr		
182	325	330	335
183	Glu Leu Gln Ser Pro Glu His Pro Leu Asp Gln His Tyr Arg Asn Leu		
184	340	345	350
185	His Cys Ala Leu Arg Pro Leu Asp His Glu Ser Tyr Glu Phe Lys Val		
186	355	360	365
187	Ile Ser Gln Tyr Leu Gln Ser Thr His Ala Pro Thr His Ser Asp Tyr		
188	370	375	380
189	Thr Met Thr Leu Leu Asp Leu Phe Glu Val Glu Lys Asp Gly Glu Lys		
190	385	390	395
191	Glu Ala Phe Arg Glu Asp Leu His Asn Arg Met Leu Leu Trp His Gly		
192	405	410	415

## RAW SEQUENCE LISTING

DATE: 11/19/2002

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Input Set : N:\CrF4\11132002\I701586C.raw

Output Set: N:\CRF4\11192002\I701586C.raw

193 Ser Arg Met Ser Asn Trp Val Gly Ile Leu Ser His Gly Leu Arg Ile  
 194           420                          425                          430  
 195 Ala Pro Pro Glu Ala Pro Ile Thr Gly Tyr Met Phe Gly Lys Gly Ile  
 196           435                          440                          445  
 197 Tyr Phe Ala Asp Met Ser Ser Lys Ser Ala Asn Tyr Cys Phe Ala Ser  
 198           450                          455                          460  
 199 Arg Leu Lys Asn Thr Gly Leu Leu Leu Ser Glu Val Ala Leu Gly  
 200           465                          470                          475                          480  
 201 Gln Cys Asn Glu Leu Leu Glu Ala Asn Pro Lys Ala Glu Gly Leu Leu  
 202           485                          490                          495  
 203 Gln Gly Lys His Ser Thr Lys Gly Leu Gly Lys Met Ala Pro Ser Ser  
 204           500                          505                          510  
 205 Ala His Phe Val Thr Leu Asn Gly Ser Thr Val Pro Leu Gly Pro Ala  
 206           515                          520                          525  
 207 Ser Asp Thr Gly Ile Leu Asn Pro Asp Gly Tyr Thr Leu Asn Tyr Asn  
 208           530                          535                          540  
 209 Glu Tyr Ile Val Tyr Asn Pro Asn Gln Val Arg Met Arg Tyr Leu Leu  
 210           545                          550                          555                          560  
 211 Lys Val Gln Phe Asn Phe Leu Gln Leu Trp  
 212           565                          570  
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 215 <211> LENGTH: 2265  
 216 <212> TYPE: DNA  
 217 <213> ORGANISM: Homo sapiens  
 218 <220> FEATURE:  
 219 <221> NAME/KEY: CDS  
 220 <222> LOCATION: (242)...(1843)  
 221 <223> OTHER INFORMATION: product is Poly ADP Ribose Polymerase; from uterus tissue  
 222 <400> SEQUENCE: 3  
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 224 tagccgatgt ctaatcccc acacaagctc atccccggcc tctggattt ttgggaattc         120  
 225 tctccctaatt tcacgcctga ggctcatgga gagttcttag acctgggact gcccctggag         180  
 226 ggcacaccaa ccaggccggg tggcagccag gacctctccc atgtccctgc ttttcttggc         240  
 227 c atg gct cca aag ccg aag ccc tgg gta cag act gag ggc cct gag         286  
 228       Met Ala Pro Lys Pro Trp Val Gln Thr Glu Gly Pro Glu  
 229           1                        5                        10                       15  
 230 aag aag aag ggc cgg cag gca gga agg gag gag gac ccc ttc cgc tcc         334  
 231 Lys Lys Lys Gly Arg Gln Ala Gly Arg Glu Glu Asp Pro Phe Arg Ser  
 232           20                        25                       30  
 233 acc gct gag gcc ctc aag gcc ata ccc gca gag aag cgc ata atc cgc         382  
 234 Thr Ala Glu Ala Leu Lys Ala Ile Pro Ala Glu Lys Arg Ile Ile Arg  
 235           35                        40                       45  
 236 gtg gat cca aca tgt cca ctc agc agc aac ccc ggg acc cag gtg tat         430  
 237 Val Asp Pro Thr Cys Pro Leu Ser Ser Asn Pro Gly Thr Gln Val Tyr  
 238           50                        55                       60  
 239 gag gac tac aac tgc acc ctg aac cag acc aac atc gag aac aac aac         478  
 240 Glu Asp Tyr Asn Cys Thr Leu Asn Gln Thr Asn Ile Glu Asn Asn Asn  
 241           65                        70                       75  
 242 aac aag ttc tac atc atc cag ctg ctc caa gac agc aac cgc ttc         526

RAW SEQUENCE LISTING ERROR SUMMARY                    DATE: 11/19/2002  
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**Please Note:**

Use of n and/or Xaa have been detected in the Sequence Listing. Please review the Sequence Listing to ensure that a corresponding explanation is presented in the <220> to <223> fields of each sequence which presents at least one n or Xaa.

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Seq#:12; Xaa Pos. 1,2,6,7,9,10,11,12,13,14,16,17,18  
Seq#:13; Xaa Pos. 6,7,8,9,10,11,12,13,16,17,21,22,24,25,26,27,28,29,31,32  
Seq#:13; Xaa Pos. 33,41,42,43,48  
Seq#:14; Xaa Pos. 1,2,3,4,5,6,7,9,10,11,12,13,14,16,17,18,19,20,21  
Seq#:15; Xaa Pos. 2,3,4,5,6,7,8,9,10,12,13,15,16,20,21,22,23,24,25,26,27,28  
Seq#:15; Xaa Pos. 29,30,31,32  
Seq#:16; Xaa Pos. 2,3,4,6,8,9,10,11,14,16,18,19,20,21,22,24,25,26,28  
Seq#:17; Xaa Pos. 2,4,5,6,8,9,10,11,12,13,14,15,16,18,19,20,21,22,23,24,25  
Seq#:17; Xaa Pos. 26,27,33,34,35,38,39,40,41,42,43  
Seq#:18; Xaa Pos. 4,8,11,12,13  
Seq#:19; Xaa Pos. 2,3,4,6,7,9,13,15,16  
Seq#:20; Xaa Pos. 2,3,4,6  
Seq#:21; Xaa Pos. 2,3,5,6,7,8,10,11,12,14,15,16,17,18,19,20,21,22,24,26,27  
Seq#:22; Xaa Pos. 2,3,4,6,7,8,10,11,12,13  
Seq#:29; Xaa Pos. 2,3,4  
Seq#:30; Xaa Pos. 2,3,5,6,7,8,9,10,11,12,13,14,15,16,17,18,19,20,21,22,23  
Seq#:30; Xaa Pos. 24,25,26,27,28,29,30,31,32,33,34,36,37

**Invalid Line Length:**

The rules require that a line not exceed 72 characters in length. This includes spaces.

Seq#:1; Line(s) 23  
Seq#:3; Line(s) 221  
Seq#:5; Line(s) 418  
Seq#:11; Line(s) 988  
Seq#:13; Line(s) 1034,1035  
Seq#:15; Line(s) 1082  
Seq#:16; Line(s) 1099  
Seq#:17; Line(s) 1115  
Seq#:21; Line(s) 1180,1181  
Seq#:30; Line(s) 1297

**VERIFICATION SUMMARY**

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Input Set : N:\Crf4\11132002\I701586C.raw  
Output Set: N:\CRF4\11192002\I701586C.raw

L:9 M:270 C: Current Application Number differs, Wrong Format  
L:994 M:341 W: (46) "n" or "Xaa" used, for SEQ ID#:11 after pos.:0  
L:1017 M:341 W: (46) "n" or "Xaa" used, for SEQ ID#:12 after pos.:0  
L:1019 M:341 W: (46) "n" or "Xaa" used, for SEQ ID#:12 after pos.:16  
L:1041 M:341 W: (46) "n" or "Xaa" used, for SEQ ID#:13 after pos.:0  
L:1043 M:341 W: (46) "n" or "Xaa" used, for SEQ ID#:13 after pos.:16  
L:1045 M:341 W: (46) "n" or "Xaa" used, for SEQ ID#:13 after pos.:32  
L:1064 M:341 W: (46) "n" or "Xaa" used, for SEQ ID#:14 after pos.:0  
L:1066 M:341 W: (46) "n" or "Xaa" used, for SEQ ID#:14 after pos.:16  
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L:1122 M:341 W: (46) "n" or "Xaa" used, for SEQ ID#:17 after pos.:0  
L:1124 M:341 W: (46) "n" or "Xaa" used, for SEQ ID#:17 after pos.:16  
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L:1301 M:341 W: (46) "n" or "Xaa" used, for SEQ ID#:30 after pos.:16  
L:1303 M:341 W: (46) "n" or "Xaa" used, for SEQ ID#:30 after pos.:32